



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| (51) International Patent Classification 7 :<br><br>C12N 15/67, 15/80, 15/81, C12P 21/02,<br>C12N 15/55, 9/18, 9/36, 15/13, C07K<br>16/00  |  | A3   | (11) International Publication Number: WO 00/05389<br><br>(43) International Publication Date: 3 February 2000 (03.02.00) |
| (21) International Application Number: PCT/EP99/04919<br><br>(22) International Filing Date: 8 July 1999 (08.07.99)  |  | (74) Agent: WURFBAIN, Gilles, L.; Unilever N.V., Patent Department, Olivier van Noortlaan 120, NL-3133 AT Vlaardingen (NL).  |   |
| (30) Priority Data:<br>98202432.5 20 July 1998 (20.07.98) EP   |  | (81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). |   |
| (71) Applicant (for all designated States except AU BB CA CY GB GD GH IE IL KE LK LS MN MW NZ SD SG SZ TT UG ZA): UNILEVER N.V. [NL/NL]; Weena 455, NL-3013 AL Rotterdam (NL).<br><br>(71) Applicant (for AU BB CA CY GB GD GH IE IL KE LK LS MN MW NZ SD SG SZ TT UG ZA only): UNILEVER PLC [GB/GB]; Unilever House, Blackfriars, London EC4P 4BQ (GB).   |  | <p><b>Published</b><br/> <i>With international search report.<br/> Before the expiration of the time limit for amending the claims<br/> and to be republished in the event of the receipt of amendments.</i></p> <p>(88) Date of publication of the international search report: 2 June 2000 (02.06.00)</p>  |   |
| <p>(54) Title: PRODUCTION OF PROTEINS</p> <p>(57) Abstract</p> <p>A method for producing a heterologous protein in a lower eukaryotic cell, followed by secretion of said protein from said cell, said protein comprising at least one hydrophobic stretch, wherein the protein is glycosylated such as to increase the level of secretion of the protein, without substantially affecting the functionality of the protein and wherein at least one N-glycosylation group is located between the N-terminus of the protein and the first hydrophobic stretch.</p> |  |  |   |

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## INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP 99/04919

## A. CLASSIFICATION OF SUBJECT MATTER

|       |           |           |           |           |           |
|-------|-----------|-----------|-----------|-----------|-----------|
| IPC 7 | C12N15/67 | C12N15/80 | C12N15/81 | C12P21/02 | C12N15/55 |
|       | C12N9/18  | C12N9/36  | C12N15/13 | C07K16/00 |           |

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C12N C12P C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category | Citation of document, with indication, where appropriate, of the relevant passages   | Relevant to claim No. |
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| Y        |  | 5                     |



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

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Date of the actual completion of the International search

28 March 2000

Date of mailing of the International search report

04/04/2000

## Name and mailing address of the ISA

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| Category * | Citation of document, with indication, where appropriate, of the relevant passages  | Relevant to claim No. |
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